WILDLAND-URBAN INTERFACE - 2004 CODE CHANGES
County Fire and Building Code Requirements

The wildfires of 2003 were the largest in California history, and had a huge impact on lives in San Diego County. The fires demonstrated, again, how vulnerable and powerless we are in the face of wildfire. Below are some examples of the problems that we have identified from prior fires:

- Vulnerable building construction;
- Structures ignited by native and landscape vegetation;
- Poor access and escape routes;
- Inadequate water supplies; and,
- Limited fire fighting resources

For decades, the County has worked with fire agencies, planners, environmental experts and the building industry to craft codes that are responsive to the wildfire challenge. Over the past years, the County's fires codes have been strengthened in successive code adoption cycles since the 1980's, with the primary goal of protecting the safety of our citizens and enhancing your home's ability to survive wildfire.

These changes have paid off. In the Cedar, Paradise and Otay fires (October, 2003) 2,137 homes were destroyed in the County (unincorporated) area. There were approximately 15,000 homes in the burn area; therefore the "loss" rate was about 14%. In comparison, there were slightly over 400 homes in the fire-damaged area that were built under the 2001 Fire and Building Codes. Of these more recently built (and more fire-resistive) homes, only 17 were destroyed – a "loss" rate of only 4%. Therefore, **homes built under recent codes have a more than three times better chance of survival!**

Although such measures protected many homes located within the areas impacted by the 2003 wildfire, lessons learned from the devastating wildfires of 2003 resulted in further refining of the codes, which became effective August 13, 2004.

The attached is a **SUMMARY** of key changes in the 2004 Fire and Building Codes; however, it is only a summary and does not include all issues and all options. When designing a project please also refer to the actual code language. The codes are available at the cashier in any of the Department of Planning and Land Use offices or on the web at:

http://www.amlegal.com/sandiego_county_ca

http://www.co.san-diego.ca.us/dplu/docs/firecode.pdf

5201 RUFFIN ROAD, SUITE B, SAN DIEGO, CA 92123-1666 ●(858) 565-5920 ● (888) 336-7553
200 EAST MAIN ST.- SIXTH FLOOR, EL CAJON, CA 92020-3912 ● (619) 441-4030
338 VIA VERA CRUZ - SUITE 201, SAN MARCOS, CA 92069-2620 ● (760) 471-0730

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Summary of County Building and Fire Code Requirements

Fuel Modification Requirements

The fuel (vegetation) modification zone remains the same at a minimum of 100 feet from structures. In cases where the size of the lot or location of the building pad makes it impossible to achieve the full 100 feet of fuel modification on the parcel, the structure is required to be constructed to more stringent standards. (See Building Construction Requirements – "Enhanced" below for more information**)**.

The 100 foot modification area is encouraged to be divided into two zones: the first zone, which is that area located within 50 feet of the structure, must be cleared and planted with fire-resistant plants. The landscaping must also be irrigated. The second zone, which is that area between 50 and 100 feet away from the structure, may include native vegetation, but it must be thinned by at least 50%, and all dead and dying vegetation must be removed. For more information on creating defensible space around your home and guidance regarding suggested planting materials see the County web site at:

http://www.sdcounty.ca.gov/dplu/fire_resistant.html

Building Construction Requirements

Fire-resistive construction requirements in the County's building code and fire code have changed only slightly and are divided into two tiers noted as **"**basic" or "enhanced".

- **"Basic"** fire-resistive construction is applied to all buildings that are located within the Wildland Urban Interface area. The Wildland-Urban Interface is an area where combustible vegetation increases the possibility of a vegetation conflagration – uncontrolled fire spreading through vegetation fuels, exposing and consuming structures in the advancing path of flame.

- **"Enhanced"** fire-resistive construction requirements (in addition to "Basic" requirements) are applied where 100' clearance around all structures cannot be achieved on the parcel, or where steep terrain or other special circumstances create additional hazard, or there is the presence of high fuel loads.

BASIC fire-resistive features include:

- ***Roofs:*** Roofs shall have a minimum Class 'A' roof covering. For roof coverings where the profile allows a space between the roof covering and roof sheathing, the space at the eave ends must be fire-stopped to keep out flames or embers.

- ***Exterior wall***: Exterior wall surfaces must be non-combustible. Examples are stucco, masonry, and cement-fiber board. Previously required only when 100' clearance could not be achieved, it is now required regardless of clearance. An exception exists where 3/8-inch plywood or 3/4-inch drop siding is allowed over fire-rated drywall.

- ***Eaves:*** Combustible eaves, soffits and fascias must be fire-resistive. A policy document (form DPLU #198) lists possible options.

- ***Unenclosed Underfloor Areas***: Homes built on stilts or open post and beam construction are no longer permitted unless enclosed to the ground with non-combustible construction.

- ***Vents***: Attic vents are generally discouraged in overhang areas in favor of gable-end vents and roofs vents such as ridge vents, dormer vents, and low profile roof vents. Vents are permitted in the eave assembly only under the following conditions:

    - When allowed by the Fire Authority Having Jurisdiction and the eaves do not face the wildland fuels; or,

    - Enclosed eaves may be vented on the underside of the eave closest to the fascia provided the closest edge of the vent opening is at least 12 inches from the exterior wall.

- ***Windows (glazing):*** Windows are restricted to tempered glass, or multi-pane glass assemblies, or glass block. Vinyl window frames must have welded corners with metal reinforcing to prevent glass from falling out with flame impingement. In addition, vinyl windows must have a label showing they are certified to ANSI/AAMA/NWWDA 101/I.S.2-97 structural requirements.

- ***Skylights:*** Skylights must be tempered glass or a class "A" rated assembly except when the structure is protected with an automatic fire sprinkler system.

- ***Insulation:*** Paper faced insulation is not permitted in attics or ventilated spaces due to the potential of embers igniting the paper. Foil-backed or un-faced fiberglass batts and blankets are better suited to conditions of potential fire hazards. Use foil-backed insulation in areas where a vapor barrier is required.

ENHANCED fire-resistive features include all the **Basic** features mentioned above, plus the following:

- ***Skylights:*** Skylights must be tempered glass or a class "A" rated assembly.

- ***Eave Vents:*** Eave vents are prohibited when enhanced fire-resistive construction is required.

- ***Gutters and Downspouts***: Gutters and downspouts must be constructed of non-combustible material, and designed to reduce accumulation of leaf litter and debris.

- ***Exterior doors:*** Exterior doors must be approved non-combustible construction, or solid-core wood not less than 1¾" thick, or have a fire protection rating of not less than "20 minutes."

- ***Decks, balconies, carports, and patio covers:*** Decks, balconies, carports, patio covers, and other projections and attachments must be of non-combustible construction, or fire-retardant treated wood (pressure-treated, installed per listing), or heavy timber construction, or one-hour fire-resistive construction. ***Note:*** *Untreated wood, plastic, and composite wood decking material is <u>not</u> permitted in "enhanced" areas.*

- ***Fences and other attachments*** the first five feet of fences and other items attached to a structure shall be constructed of non-combustible material or meet the same fire-resistive standards as the exterior walls of the structure.

Water Tank Requirements

Water tank requirements have also been simplified. Instead of a sliding and sometimes confusing scale from 1500 gallons to 10,000 gallons, there are now only two sizes. These are based on total area of building to be protected. They are:

Up to 1500 sq. ft.	=	5,000 gallons
Over 1500 sq. ft.	=	10,000 gallons

Residential Fire Sprinkler Requirements

Residential Fire Sprinkler requirements have not been changed and are required in almost all circumstances in hazardous fire areas. Residential fire sprinklers are designed to protect occupants from fires that start inside the dwelling, and are not intended to protect the home from wildfire (though there have been a few cases where radiant heat ignition of interior contents was stopped by a sprinkler.) Far more people die in fires that start within dwellings than start anyplace else, including wildfires.